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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/550,234	09/22/2005	Takayuki Ogiso	SONYJP 3.3-365	1868

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EXAMINER	
HANNON, CHRISTIAN A	

ART UNIT	PAPER NUMBER
2618	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/550,234	OGISO ET AL.	
	Examiner	Art Unit	
	Christian A. Hannon	2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 September 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2 and 5-15* is/are rejected.

7)☒ Claim(s) *3 and 4* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 9/22/05 is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *9/22/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 9/22/2005 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the examiner is considering the information disclosure statement.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Regarding claims 12-15 the claimed inventions are directed to non-statutory subject matter.

Claim 12 recites "a program for causing a terminal..." in the first line of the claim. The examiner suggests "a computer readable medium storing a computer program."

Claim 13 depends from claim 12 and is rejected accordingly.

Claim 14 recites "a storage medium which stores a program in a manner readable by a computer for execution..." in the first line of the claim. The examiner suggests "a computer readable medium storing a computer program."

Claim 15 depends from claim 14 and is rejected accordingly.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) The invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 2, 10, 12 & 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Liu et al (US 2004/0190467), hereinafter Liu.

Regarding claim 1, Liu teaches a wireless communication system made up of a plurality of devices, comprising a first device which, upon transmitting a physical layer frame including an upper layer frame relative to an upper layer above a physical layer, indicates a length of said upper layer frame in a header of said physical layer frame and a destination of said upper layer frame in a header of said upper layer frame and a second device which, after determining upon receipt of said header of said upper layer frame that said second device is not the destination of the frame, goes into a sleep state for a predetermined time period in accordance with said length of said upper layer frame extracted from said header of said physical layer frame (Page 2, [0026-0027], Page 3, [0030]).

Regarding claim 2, Liu teaches a terminal which receives a physical layer frame including an upper layer frame relative to an upper layer above a physical layer and

which has power-saving mode involving operations more energy-efficient than normal operations, comprising power-saving operation time calculating means for calculating a power-saving operation time in accordance with a length of said upper layer frame extracted from a header of said physical layer frame (Page 3, [0043], Page 4, [0045]) address detecting means which, after detecting a destination address from a header of said upper layer frame upon receipt thereof and determining that said upper layer frame is not destined for said terminal, gives an instruction for transition into said power-saving mode starting from the beginning of a body of said upper layer frame (Page 6, [0084]) and means which, upon elapse of said power-saving operation time calculated in response to said instruction for transition into said power-saving mode, gives an instruction to cancel said power-saving mode (Page 6, [0084]). Liu teaches that in the case where a stations AID is found the power-saving mode is 'canceled' in effect by powering on to receive a packet.

Regarding claim 10 Liu teaches a processing method for use with a terminal which has power-saving mode involving operations more energy-efficient than normal operations, said processing method comprising the steps of starting to receive a physical layer frame including an upper layer frame relative to an upper layer above a physical layer (Page 2, [0026]) calculating a power-saving operation time in accordance with a length of said upper layer frame extracted from a header of said physical layer frame (Page 6, [0084]) after detecting a destination address from a header of said upper layer frame upon receipt thereof and determining that said upper layer frame is not destined for said terminal, giving an instruction for transition into said power-saving

mode starting from the beginning of a body of said upper layer frame (Page 6, [0087]) and upon elapse of said power-saving operation time calculated in response to said instruction for transition into said power-saving mode, giving an instruction to cancel said power-saving mode (Page 6, [0084]). Liu teaches that in the case where a stations AID is found the power-saving mode is 'canceled' in effect by powering on to receive a packet.

Regarding claim 12, Liu teaches a program for causing a terminal having power-saving mode involving operations more energy-efficient than normal operations to carry out a procedure, said program comprising the steps of starting to receive a physical layer frame including an upper layer frame relative to an upper layer above a physical layer (Page 2, [0026]) calculating a power-saving operation time in accordance with a length of said upper layer frame extracted from a header of said physical layer frame (Page 6, [0084]) after detecting a destination address from a header of said upper layer frame upon receipt thereof and determining that said upper layer frame is not destined for said terminal, giving an instruction for transition into said power-saving mode starting from the beginning of a body of said upper layer frame (Page 6, [0087]) and upon elapse of said power-saving operation time calculated in response to said instruction for transition into said power-saving mode, giving an instruction to cancel said power-saving mode (Page 6, [0084]). Liu teaches that in the case where a stations AID is found the power-saving mode is 'canceled' in effect by powering on to receive a packet.

Regarding claim 14, Liu teaches a storage medium which stores a program in a manner readable by a computer for execution, said program causing a terminal having

power-saving mode involving operations more energy-efficient than normal operations to carry out a procedure comprising the steps of starting to receive a physical layer frame including an upper layer frame relative to an upper layer above a physical layer (Page 2, [0026]) calculating a power-saving operation time in accordance with a length of said upper layer frame extracted from a header of said physical layer frame (Page 6, [0084]) after detecting a destination address from a header of said upper layer frame upon receipt thereof and determining that said upper layer frame is not destined for said terminal, giving an instruction for transition into said power-saving mode starting from the beginning of a body of said upper layer frame (Page 6,.[0087]) and upon elapse of said power-saving operation time calculated in response to said instruction for transition into said power-saving mode, giving an instruction to cancel said power-saving mode (Page 6, [0084]).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 5-8, 11, 13 & 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liu in view of Kavehrad et al (US 4,701,909), hereinafter Kavehrad.

Regarding claims 5, 11, 13 & 15, Liu teaches claims 2, 10,12 & 14 respectively, however fails to teach an inhibiting means for inhibiting the transition into said power-

saving mode regardless of said instruction given by said address detecting means if information derived from said physical layer frame fails to comply with a predetermined condition. Kavehrad teaches an inhibiting means for inhibiting an action regardless of other instructions given by other means if information derived from said physical layer frame fails to comply with a predetermined condition (Column 7, Lines 63-67; Kavehrad). Therefore it would have been obvious to combine the teachings of Liu with those of Kavehrad in order to provide for a higher quality system, that is higher power conservation through error checking. It then follows that all similar recited claims drawn to the same principle are rejected on similar grounds

Regarding claim 6, Liu and Kavehrad teach claim 5, wherein said inhibiting means includes means for inhibiting the transition into said power-saving mode if a predetermined error is detected in a preamble of said physical layer frame (Column 1, Lines 10-15; Kavehrad).

Regarding claim 7, Liu and Kavehrad teach claim 5, wherein said inhibiting means includes means for inhibiting the transition into said power saving mode if a predetermined error is detected in said header of said physical layer frame (Column 1, Lines 10-15; Kavehrad).

Regarding claim 8, Liu and Kavehrad teach claim 5, wherein said inhibiting means includes means for inhibiting the transition into said power-saving mode if a value out of a prescribed range is detected in said header of said physical layer frame (Column 1, Lines 10-15; Kavehrad). It is noted by the examiner that a value out of a

prescribed range is a result of a calculation of a hamming code, which provides the error.

Allowable Subject Matter

8. Claims 3 & 4 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 3, Liu teaches the terminal according to claim 2, however Liu fails to teach wherein said power-saving operation time calculating means calculates as said power-saving operation time a time which is longer than a first time corresponding to said length of said upper layer frame minus the length of said header of said upper layer frame and which is less than a second time corresponding to said first time supplemented with a maximum frame interval.

Regarding claim 4, Liu teaches the terminal according to claim 2, however Liu fails to teach wherein said power-saving operation time calculating means calculates as said power-saving operation time a time obtained by adding a maximum frame interval to said length of said upper layer frame minus the length of said header of said upper layer frame.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Tuomainen et al (US 7,020,102) disclose a method for reducing the power consumption of a mobile station.

Aoshima (US 5,740,517) disclose a radio pager sync acquisition timing arrangement for battery saving operation.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christian A. Hannon whose telephone number is (571) 272-7385. The examiner can normally be reached on Mon. - Fri. 8:00 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Urban can be reached on (571) 272-7899. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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June 12, 2007

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